

Intermediate floor - gdhbvtxa01b-00

intermediate floor, Holzbetonverbund, suspended, dry, without filling, Gipsplatte

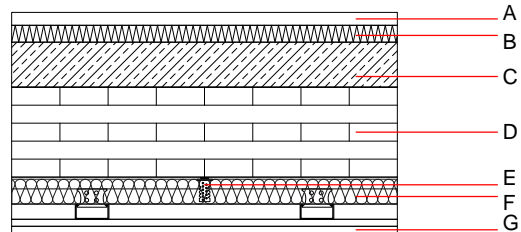
Performance rating

Fire protection performance REI 90
 maximum span = 4,7 m; maximum load $E_{d,fi} = 5,5 \text{ kN/m}^2$ (without floor construction)
 Classified by HFA

Thermal performance U Diffusion 0.32 $\text{W}/(\text{m}^2\text{K})$ suitable
 Calculated by HFA

Acoustic performance $R_w (C;C_{tr})$ 73(-5;12) dB
 $L_{n,w} (C_i)$ 36(2)
 $[C_{150-2500}] = [13]$ dB
 Assessed by HFA

Mass per unit area m 322.90 kg/m^2
 Calculation based on gypsum plaster board type DF



Register of building materials used for this application, cross-section (from outside to inside, dimensions in mm)

	Thickness	Building material	Thermal performance				Reaction to fire EN
			λ	μ min - max	ρ	c	
A	23.0		0.320	11	1150	1.100	A2
B	20.0	impact sound absorbing subflooring [$s' \leq 30 \text{ MN}/\text{m}^3$]	0.036	1	130	1.030	A1
C	80.0		2.000	80 - 130	2400	1.000	A1
D	160.0	cross laminated timber 5-ply	0.130	50	500	1.600	D
E	75.0						
F	50.0	mineral wool [040; ≥ 16 ; $< 1000^\circ\text{C}$]	0.040	1	16	1.030	A1
G	25.0	gypsum plaster board type DF 2x12,5mm or	0.250	10	800	1.050	A2
G	25.0	gypsum fibre board 2x12,5mm	0.320	21	1000	1.100	A2

Sustainability rating (per m^2)

Database ecoinvent

$O13_{Kon}$ 67.7
 Calculated by HFA

Details of sustainability rating

Database ecoinvent

Lifecycle (Phases)	GWP [kg CO ₂ -e.]	AP [kg SO ₂ -e.]	EP [kg PO ₄ -e.]	ODP [kg R11-e.]	POCP [kg Ethen-e.]	
A1 - A3		0.307	0.130	5,19E-6	0.084	

Lifecycle (Phases)	PERE [MJ]	PERM [MJ]	PERT [MJ]	PENRE [MJ]	PENRM [MJ]	PENRT [MJ]
A1 - A3	146.522	1094.400	1240.922	1021.449	27.489	1048.938